

Technological features of meta-subject expertise development in mathematical education of secondary school students of 5th Grades

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Abstract

© 2018 by the authors. The relevance of the research lies in the necessity to cultivate the development of the person who can adapt to conditions of education, response proportionally to changes in the structure and content of educational processes and always be ready for continuous self-development. This research can be performed even at a school educational process using the traditional curriculum and subjects, namely mathematics, in case an educational process is aimed at the achievement of high results in the matter, personal and meta-subject aspects. The modern educational process during mathematics lessons according to the federal standard regulations and recommendations from the Concept of mathematical education development of the Russian Federation has to be aimed at the development of meta-subject skills. This can be provided in case if the meta-subject expertise development technology is applied which helps boost a student's potential of acquiring meta-subject, personal and subject educational results supplied that mathematics stayed integral and connected with other educational spheres. The article contains reasonable details of the technology, such as the structure and aims of educational processes among pupils for further development of their meta-subject expertise in mathematics. Also, a sophisticated diagnostic programme of tracing of meta-subject learning results dynamics in mathematics among secondary school students of 5th grades aged 11-12 years is introduced. The results of the conducted research indicate that the development of the meta-subject expertise by computation among pupils of the secondary school makes it possible to arrange a more effective educational process to achieve high meta-subject results.

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Keywords

Diagnostic programme, Mathematics in secondary school, Subject to an educational process, Technology, The structure of a mathematical education course

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